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In the claims:

Claims 1-2 cancelled.

3. (currently amended) A system for cleaning a glass surface of a surface light or a reflector defined in claim 26 further comprising a driver's aid for directional guidance that is capable of operating a truck to capture an object to be cleaned at a predetermined position from an image taken by a forward looking CCD camera mounted under the truck, capable of moving the forward looking CCD camera while automatically capturing the object image, and capable of instructing driving speed and direction of the truck depending on its operation stage.

4. (currently amended) ~~A system for cleaning a glass surface of a surface light or a reflector defined in claim 2A~~ A system for cleaning a glass surface of a surface light or a reflector comprising a truck mounted with a cleaning agent blaster, an articulated working robot including a blast nozzle and a CCD camera mounted on a front end of a manipulator, and an operating unit including an on-vehicle computer operable for recognizing dimensions from positional information based on an image of the cleaned object taken by the CCD camera and for collating the image shape of the object with a stored shape so as to calculate positional information of the object.

wherein an opening floor part which is freely open-close is provided in the vicinity of the center or the rear part of a load bed of the truck for lowering the blast nozzle mounted on the front end of the manipulator toward the object located on the ground and under the load bed in connection with instructions from the on-vehicle computer;

and wherein a monitor displaying an image taken by the CCD camera for monitoring a cleaned object and a start/stop button for cleaning operation are provided near the driver's seat;

so that after the blast nozzle is lowered, a cleaning agent is blasted from the blast nozzle mounted on the front end of the manipulator of the working robot toward the target object while measuring and determining the extent of cleaning based on brightness or light intensity of the cleaned object from an image taken by the CCD camera to perform and complete automatic cleaning,

further comprising an extensible cornice for preventing dissipation of abrasives provided in such a manner to hang under the periphery of an opening floor part of the load bed of a truck so that the abrasive and its volatilized gas produced after cleaning do not leak outside, wherein the opening floor part is closed and the cornice is folded after cleaning so that the abrasive and its volatilized gas are sealed within an isolated room in a canopy on the load bed of the truck mounted with a working robot.

5. (currently amended) A system for cleaning a glass surface of a surface light or a reflector defined in claim 26, wherein driving instruction is given by using an image taken by an approach camera provided at the position where an image beneath an opening floor part can be taken, wherein the image can be used as start-up information for the automatic cleaning system which operates on a manipulator.

6. (currently amended) ~~A system for cleaning a glass surface of a surface light or a reflector defined in claim 2A~~ a system for cleaning a glass surface of a surface light or a reflector comprising a truck mounted with a cleaning agent blaster, an articulated working robot including a blast nozzle and a CCD camera mounted on a front end of a manipulator, and an operating unit including an on-vehicle computer operable for recognizing dimensions from positional information based on an image of the cleaned object taken by the CCD camera and for collating the image shape of the object with a stored shape so as to calculate positional information of the object,

wherein an opening floor part which is freely open-close is provided in the vicinity of the center or the rear part of a load bed of the truck for lowering the blast nozzle mounted on the front end of the manipulator toward the object located on the ground and under the load bed in connection with instructions from the on-vehicle computer;

and wherein a monitor displaying an image taken by the CCD camera for monitoring a cleaned object and a start/stop button for cleaning operation are provided near the driver's seat;

so that after the blast nozzle is lowered, a cleaning agent is blasted from the blast nozzle mounted on the front end of the manipulator of the working robot toward the target object while measuring and determining the extent of cleaning based on brightness or light intensity of the cleaned object from an image taken by the CCD camera to perform and complete automatic cleaning, and

wherein transmittancy or luminous intensity of an object is measured after cleaning to determine if re-cleaning is required or cleaning is completed.

7. (currently amended) ~~A system for cleaning a glass surface of a surface light or a reflector defined in claim 2~~A system for cleaning a glass surface of a surface light or a reflector comprising a truck mounted with a cleaning agent blaster, an articulated working robot including a blast nozzle and a CCD camera mounted on a front end of a manipulator, and an operating unit including an on-vehicle computer operable for recognizing dimensions from positional information based on an image of the cleaned object taken by the CCD camera and for collating the image shape of the object with a stored shape so as to calculate positional information of the object,

wherein an opening floor part which is freely open-close is provided in the vicinity of the center or the rear part of a load bed of the truck for lowering the

blast nozzle mounted on the front end of the manipulator toward the object located on the ground and under the load bed in connection with instructions from the on-vehicle computer;

and wherein a monitor displaying an image taken by the CCD camera for monitoring a cleaned object and a start/stop button for cleaning operation are provided near the driver's seat;

so that after the blast nozzle is lowered, a cleaning agent is blasted from the blast nozzle mounted on the front end of the manipulator of the working robot toward the target object while measuring and determining the extent of cleaning based on brightness or light intensity of the cleaned object from an image taken by the CCD camera to perform and complete automatic cleaning, and

wherein transmittancy or luminous intensity of an object is stored when the determination of the completion of the cleaning is made, so that the information is used to manage the light of the object.

8. (New) A method for blast-cleaning an object embedded in the ground having a predetermined interval between each other and having a glass surface on its top surface, comprising the steps of:

providing a truck with a canopy mounted with a cleaning agent blaster, an articulated working robot provided with a blast nozzle, a distance sensor, and a CCD camera at a front end of a manipulator, an approach camera and a passing sensor for recognizing if an object exists within coverage of the

articulated working robot, and an operation unit including on-vehicle computer which is operable to recognize dimensions and shape of the object from the measuring data based on an image and distance of an object obtained by the CCD camera and the distance sensor in such a manner to collate the thus obtained data with a stored shape, and then operable to process the information of the glass surface of the object to be cleaned;

providing a monitor displaying an image taken by the approach camera or the CCD camera for monitoring a cleaned object and a start/stop button for starting/stopping automated cleaning operation of the articulated working robot near the driver's seat of the truck;

providing an opening floor part which is freely open-close in the vicinity of the center or the rear part of a load bed of the truck wherein the approach camera and the passing sensor are mounted on its circumference for stopping the truck when capturing an image of an object through the monitor within their lower photographed area; and

automatically cleaning a glass surface of an object to clean by steps of stopping the truck at a position where the object exists within the photographed area beneath the open-close-free opening floor part, automatically operating the articulated working robot by pressing the start button manually, approaching the blast nozzle toward the position of the glass surface of the object calculated by the on-vehicle computer, and blasting a cleaning agent from the blast nozzle

while measuring and determining the extent of cleaning based on brightness or light intensity of the object cleaned from an image taken by the CCD camera.

9. (New) A system for blast-cleaning an object embedded in the ground having a predetermined interval between each other and having a glass surface on its top surface, comprising:

a truck having a canopy mounted with a cleaning agent blaster, an articulated working robot provided with a blast nozzle, a distance sensor, and a CCD camera at a front end of a manipulator, an approach camera and a passing sensor for recognizing if an object exists within coverage of the articulated working robot, and an operation unit including on-vehicle computer which is operable to recognize dimensions and shape of the object from the measuring data based on an image and distance of an object obtained by the CCD camera and the distance sensor in such a manner to collate the thus obtained data with a stored shape, and, then operable to process the information of the glass surface of the object to be cleaned;

a monitor displaying an image taken by the approach camera or the CCD camera for monitoring a cleaned object and a start/stop button for starting/stopping automated cleaning operation of the articulated working robot provided near the driver's seat of the truck; and

an opening floor part which is freely open-close provided in the vicinity of the center or the rear part of a load bed of the truck wherein the approach

camera and the passing sensor are mounted on its circumference for stopping the truck when capturing an image of an object through the monitor within their lower photographed area;

wherein after stopping the truck at a position where the object exists within the photographed area beneath the open-close-free opening floor part, the articulated working robot is automatically operated by pressing the start button manually so as to approach the blast nozzle toward the position of the glass surface of the object calculated by the on-vehicle, and to blast a cleaning agent from the blast nozzle while measuring and determining the extent of cleaning based on brightness or light intensity of the object cleaned from an image taken by the CCD camera to perform automatic cleaning of the glass surface of the object.

10. (new) A system defined in claim 9, wherein the object to be cleaned is a glass surface of a surface light, a runway light or a reflection mirror and the cleaning agent is powder type bicarbonate or dry ice.

11. (new) A system defined in claim 9, further comprising a driver's aid for directional guidance that is capable of operating a truck to capture an object to be cleaned at a predetermined position from an image taken by a forward looking CCD camera mounted under the truck by marking a screen with a cursor, capable of moving the forward looking CCD camera automatically while

capturing the object image and capable of instructing driving speed and direction of the truck depending on its operation stage.

12. (new) A system for blast-cleaning an object embedded in the ground having a predetermined interval between each other and having a glass surface on its top surface comprising:

a truck having a canopy mounted with a cleaning agent blaster, an articulated working robot provided with a blast nozzle, a distance sensor, and a CCD camera at a front end of a manipulator, an approach camera and a passing sensor for recognizing if an object exists within coverage of the articulated working robot, and an operation unit including on-vehicle computer which is operable to recognize dimensions and shape of the object from the measuring data based on an image and a distance of an object obtained by the CCD camera and the distance sensor in such a manner to collate the thus obtained data with a stored shape, and then operable to process the information of the glass surface of the object to be cleaned;

a monitor displaying an image taken by the approach camera or the CCD camera for monitoring a cleaned object and a start/stop button for starting/stopping automated cleaning operation of the articulated working robot provided near the driver's seat of the truck; and

an opening floor part which is freely open-close provided in the vicinity of the center or the rear part of a load bed of the truck wherein the approach

camera and the passing sensor are mounted on its circumference for stopping the truck when capturing an image of an object through the monitor within their lower photographed area;

wherein an extensible cornice for preventing dissipation of abrasives provided in such a manner to hang under the periphery of an opening floor part of the load bed of a truck so that the abrasive and its volatilized gas produced after cleaning do not leak outside, wherein the opening floor part is closed and the cornice is folded after cleaning so that the abrasive and its volatilized gas are sealed within an isolated room in a canopy on the load bed of the truck mounted with the articulated working robot.

13. (new) A system defined in claims 9 or 12, wherein driving instructions is given by using an image taken by an approach camera provided at the position where an image beneath an opening floor part can be taken, wherein the image can be used as start-up information for the automatic cleaning system which is operated by a manipulator.

14. (new) A system defined in claims 9 or 12, wherein transmittancy or luminous intensity of an object is measured after cleaning to determine if re-cleaning is required or cleaning is completed.

15. (new) A system defined in claims 9 or 12, wherein transmittancy or luminous intensity of an object is stored when the determination of the completion of the cleaning is made, so that the information is used to manage the light of the object.